04-12-02

3600/0700 1645

.0300

SMX 3093.6 (2001-006R1)
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Gerrit Klaerner et al. Art Unit 1645
Serial No. 10/043,394
Filed January 10, 2002
Confirmation No. 4664
For POLYMER BRUSHES FOR IMMOBILIZING MOLECULES TO A SURFACE OR SUBSTRATE HAVING IMPROVED STABILITY

April 11, 2002

TO THE COMMISSIONER OF PATENTS AND TRADEMARKS,

SIR:

INFORMATION DISCLOSURE STATEMENT

In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the duty of disclosure set forth in 37 C.F.R. 1.56, applicants submit copies of the references listed on the attached PTO/SB/08A for consideration by the Patent and Trademark Office in the above-entitled application and to be made of record therein.

Respectfully submitted,

Derick E. Allen

Derick E. Allen, Reg. No. 43,468
SENNIGER, POWERS, LEAVITT & ROEDEL
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

DEA/dep

Express Mail Label No. EL947977986US

PTO/SB/08A	Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application Number	10/043,364
	Filing Date	January 10, 2002
(Use as many sheets as necessary)	Confirmation Number	4664
	First Named Inventor	Gerrit Klaerner et al.
	Group Art Unit	1645
	Examiner Name	
Sheet 1 of 12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	1	4,581,429		Solomon et al.	04-08-1986
	2	4,946,778		Ladner et al.	08-07-1990
	3	4,973,493		Guire	11-27-1990
	4	5,002,582		Guire et al.	03-26-1991
	5	5,030,697		Hugl et al.	07-09-1991
	6	5,126,021		Grossman	06-30-1992
	7	5,143,854		Pirrung et al.	09-01-1992
	8	5,217,492		Guire et al.	06-08-1993
	9	5,240,602		Hammen	08-31-1993
	10	5,258,454		Berg et al.	11-02-1993
	11	5,424,186		Fodor et al.	06-13-1995
	12	5,436,327		Southern et al.	07-25-1995
	13	5,445,934		Fodor et al.	08-29-1995
	14	5,480,723		Klainer et al.	01-02-1996
	15	5,512,329		Guire et al.	04-30-1996

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

PTO/SB/08A				Complet if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	2	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	16	5,512,439		Hornes et al.	04-30-1996
	17	5,530,079		Veregin et al.	06-25-1996
	18	5,539,082		Nielsen et al.	07-23-1996
	19	5,624,711		Sundberg et al.	04-29-1997
	20	5,677,195		Winkler et al.	10-14-1997
	21	5,700,637		Southern	12-23-1997
	22	5,744,305		Fodor et al.	04-28-1998
	23	5,753,439		Smith et al.	05-19-1998
	24	5,770,456		Holmes	06-23-1998
	25	5,800,992		Fodor et al.	09-01-1998
	26	5,807,522		Brown et al.	09-15-1998
	27	5,824,473		Maede et al.	10-20-1998
	28	5,837,832		Chee et al.	11-17-1998
	29	5,846,724		Bensimon et al.	12-08-1998
	30	5,858,653		Duran et al.	01-12-1999
	31	5,868,938		Bomer et al.	02-09-1999
	32	5,872,003		Koster	02-16-1999
	33	5,902,723		Dower et al.	05-11-1999
	34	5,919,523		Sundberg et al.	07-06-1999
	35	5,919,626		Shi et al.	07-06-1999

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

PTO/SB/08A				Complet if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	3	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	36	5,932,711		Boles et al.	08-03-1999
	37	5,942,555		Swanson et al.	08-24-1999
	38	5,998,140		Dervan et al.	12-07-1999
	39	6,004,755		Wang	12-21-1999
	40	6,013,440		Lipshutz et al.	01-11-2000
	41	6,018,041		Drmanac et al.	01-25-2000
	42	6,027,880		Cronin et al.	02-22-2000
	43	6,040,138		Lockhart et al.	03-21-2000
	44	6,040,193		Winkler et al.	03-21-2000
	45	6,043,080		Lipshutz et al.	03-28-2000
	46	6,045,996		Cronin et al.	04-04-2000
	47	6,054,270		Southern	04-25-2000
	48	6,057,100		Heyneker	05-02-2000
	49	6,077,674		Schleifer et al.	06-20-2000
	50	6,083,697		Beecher et al.	07-04-2000
	51	6,087,102		Chenchik et al.	07-11-2000
	52	6,087,112		Dale	07-11-2000
	53	6,087,186		Cargill et al.	07-11-2000
	54	6,100,026		Nova et al.	08-08-2000

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	4	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T[6]
		Office	Number[4]	Kind Code[2] (if known)			
	55	WO	89/02449	A1	Thies Karsten, Heuck Claus-Christian	03-23-1989	
	56	WO	90/05303	A1	Pharmacia AB	05-17-1990	
	57	WO	96/24620	A1	Elf Atochem S.A.	08-15-1996	
	58	WO	97/41425	A1	Pence, Inc.; McGill University	11-06-1997	
	59	WO	98/30601	A2	E.I. Du Pont De Nemours & Co.	07-16-1998	
	60	WO	99/03894	A1	Ciba Specialty Chemicals Holding, Inc.	01-28-1999	
	61	WO	99/06425	A1	Corning Incorporated	02-11-1999	
	62	WO	99/36571	A2	Biochip Technologies, GMBH	07-22-1999	
	63	WO	99/61653	A2	Syntrix Biochip	12-02-1999	
	64	WO	00/33078	A1	Syntrix Biochip, Inc.	06-08-2000	
	65	WO	00/33084	A2	Syntrix Biochip, Inc.	06-08-2000	
	66	WO	00/43539	A2	Biochip Technologies, GMBH	07-27-2000	
	67	EP	0 205 232	A1	Kelsius, Inc.	12-17-1986	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A	Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application Number	10/043,394
	Filing Date	January 10, 2002
(use as many sheets as necessary)	Confirmation Number	4664
	First Named Inventor	Gerrit Klaerner et al.
	Group Art Unit	1645
	Examiner Name	
Sheet 5 of 12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	68	EP	0 361 229	A2	Bayer AG	07-09-1991	
	69	EP	0 780 408	A2	Bayer AG	02-09-1999	
	70	EP	1 035 218	A1	BioChip Technologies, GmbH	09-13-2000	
	71	EP	1 081 163	A1	Affymetrix, Inc.	03-07-2001	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[6]
	72	ANDERS et al. "Surface Modification with Hydrogels via Macroinitiators for Enhanced Friction Properties of Biomaterials" J.M.S. - Pure Appl. Chem. Vol. A36, Nos. 7&8 (1999) pp. 1017-1029.	
	73	BAKER et al. "Structure of Polymer Brushes Under Shear Flow in a Good Solvent" Macromolecules, Vol. 33, No. 4 (2000) pp. 1120-1122.	
	74	BENOIT et al. "Development of a Universal Alkoxyamine for "Living" Free Radical Polymerizations" Journal of the American Chemical Society, Vol. 121, No. 16 (1999) pp. 3904-3920	
	75	BERGBREITER et al. "Meisenheimer Rearrangement of Allyl N-Oxides as a Route to Initiators for Nitroxide-Mediated "Living" Free Radical Polymerizations" Macromolecules, Vol. 31, No. 18 (1998) pp. 6380-6382.	
	76	BIESALSKI et al. "Preparation and Characterization of a Polyelectrolyte Monolayer Covalently Attached to a Planar Solid Surface" Macromolecules, Vol. 32, No. 7 (1999) pp. 2309-2316.	
	77	BOVEN et al. "Radical Grafting of Poly(methyl methacrylate) onto Silicon Wafers, Glass Slides and Glass Beads" Polymer Communications, Vol. 32, No. 2 (1991) pp. 50-53.	
	78	CHAN et al. "The Biophysics of DNA Hybridization with Immobilized Oligonucleotide Probes" Biophysical Journal, Vol. 69, No. 6 (1995) pp. 2243-2255.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

PTO/SB/08A				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	6	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	79	CHEUNG et al. "Making and Reading Microarrays" Nature Genetics Supplement, Vol. 21 (1/1999) pp. 15-19.	
	80	COLE et al. "The EBV-Hybridoma Technique and Its Application to Human Lung Cancer" Monoclonal Antibodies and Cancer Therapy, Alan R. Liss, Inc. (1985) pp. 77-96.	
	81	COTE et al. "Generation of Human Monoclonal Antibodies Reactive with Cellular Antigens" Proceedings of the National Academy of Sciences" Vol. 80, No. 7 (4/1983) pp. 2026-2030.	
	82	de BOER et al. ""Living" Free Radical Photopolymerization Initiated form Surface-Grafted Iniferter Monolayers" Macromolecules, Vol. 33, No. 2 (2000) pp. 349-356.	
	83	DHAR et al. "Modification of Silica Surfaces Using Surface Initiated Polymerization" Abstracts of Papers, Part 2, 215th ACS National Meeting, Dallas, TX (1998) Abstract No. 147.	
	84	FISCHER "The Persistent Radical Effect In "Living" Radical Polymerization" Macromolecules, Vol. 30, No. 19 (1997) pp. 5666-5672.	
	85	GLAZER "Phycobilisomes: Structure and Dynamics" Annual Review of Microbiology, Vol. 36 (1982) pp. 173-198.	
	86	GRABAREK et al. "Zero-Length Crosslinking Procedure with the Use of Active Esters" Analytical Biochemistry, Vol. 185 (1990) pp. 131-135.	
	87	HARRISON et al. "Reducing Substrate Pinning of Block Copolymer Microdomains with a Buffer Layer of Polymer Brushes" Macromolecules, Vol. 33, No. 3 (2000) pp. 857-865.	
	88	HAWKER et al. "Accurate Control of Chain Ends by a Novel "Living" Free-Radical Polymerization Process" Macromolecules, Vol. 28, No. 8 (1995) pp. 2993-2995.	
	89	HAWKER "Architectural Control in "Living" Free Radical Polymerizations: Preparation of Star and Graft Polymers" Angew. Chem. Int. Ed. Engl., Vol. 34, No. 13/14 (1995) pp. 1456-1459.	
	90	HAWKER et al. "Initiating Systems for Nitroxide-Mediated "Living" Free Radical Polymerizations: Synthesis and Evaluation" Macromolecules, Vol. 29, No. 16 (1996) pp. 5245-5254.	
	91	HAWKER et al. "Manipulation of Surface Properties Using Novel Grafted Copolymer Brushes and Surface Initiated Polymerization" Polymer Preprints, Vol. 40, No. 2 (8/1999) p. 101.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A				Compl te if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	7	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	92	HAWKER et al. "Manipulation of Surface Properties Using Novel Grafted Copolymer Brushes and Surface-Initiated Polymerization" 218th ACS National Meeting, Abstracts of Papers, Part 2, New Orleans, LA (8/1999) Abstract 345-POLY.	
	93	HAWKER et al. "Synthesis and Application of Functionalized Specialty Polymers Using 'Living' Free Radical Procedures" Polymer Preprints, Vol. 39, No. 1 (3/1998) pp. 626-627.	
	94	HENDRICKSON et al. "Crystal Structure of Core Streptavidin Determined from Multiwavelength Anomalous Diffraction of Synchrotron Radiation" Proceedings of the National Academy of Sciences USA, Vol. 86, No. 7 (4/1989) pp. 2190-2194.	
	95	HERTLER et al. "Group-Transfer Polymerization on a Polymeric Support" Macromolecules, Vol. 23, No. 5 (1990) pp. 1264-1268.	
	96	HIGASHI et al. "High-Spatioresolved Microarchitectural Surface Prepared by Photograft Copolymerization Using Dithiocarbamate: Surface Preparation and Cellular Responses" Langmuir, Vol. 15, No. 6 (1999) pp. 2080-2088.	
	97	HODGES et al. "Preparation of Designer Resins via Living Free Radical Polymerization of Functional Monomers on Solid Support" J. Comb. Chem., Vol. 2, No. 1 (2000) pp. 80-88.	
	98	HOSOYA et al. "In Situ Surface-Selective Modification of Uniform Size Macroporous Polymer Particles with Temperature-Responsive Poly-N-isopropylacrylamide" Macromolecules, Vol. 27, No. 14 (1994) pp. 3973-3976.	
	99	HUANG et al. "Mixed Lamellar Films: Evolution, Commensurability Effects, and Preferential Defect Formation" Macromolecules, Vol. 33, No. 1 (2000) pp. 80-88.	
	100	HUANG et al. "Neutrality Conditions for Block Copolymer Systems on Random Copolymer Brush Surfaces" Macromolecules, Vol. 32, No. 16 (1999) pp. 5299-5303.	
	101	HUANG et al. "Surface-Initiated Radical Polymerization on Porous Silica" Analytical Chemistry, Vol. 69, No. 22 (1997) pp. 4577-4580.	
	102	HUANG et al. "Surface Initiation of Living Radical Polymerization for Growth of Tethered Chains of Low Polydispersity" Macromolecules, Vol. 32, No. 5 (1999) pp. 1694-1696.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	8	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	103	HUANG et al. "Using Surface Active Random Copolymers to Control the Domain Orientation in Diblock Copolymer Thin Films" Macromolecules, Vol. 31, No. 22 (1998) pp. 7641-7650.	
	104	HUSE et al. "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda" Science, Vol. 246, No. 4935 (12/1989) pp. 1275-1281.	
	105	HUSSEMAN et al. "Controlled Synthesis of Polymer Brushes by "Living" Free Radical Polymerization Techniques" Macromolecules, Vol. 32, No. 5 (1999) pp. 1424-1431.	
	106	HUSEMANN et al. "Manipulation of Surface Properties by Patterning of Covalently Bound Polymer Brushes" Journal of the American Chemical Society, Vol. 122, No. 8 (2000) pp. 1844-1845.	
	107	HUSEMANN et al. "Surface-Initiated Polymerization for Amplification of Self-Assembled Mono-layers Patterned by Microcontact Printing" Angew. Chem. Int. Ed., Vol. 38, No. 5 (1999) pp. 647-649.	
	108	JORDAN et al. "Surface Initiated Living Cationic Polymerization of 2-Oxazolines" Journal of the American Chemical Society, Vol. 120, No. 2 (1/1998) pp. 243-247.	
	109	KOHLER et al. "Continuous Cultures of Fused Cells Secreting Antibody of Predefined Specificity" Nature, Vol. 256, No. 5517 (8/1975) pp. 495-497.	
	110	KOZBOR et al. "The Production of Monoclonal Antibodies from Human Lymphocytes" Immunology Today, Vol. 4, No. 3 (1983) pp. 72-79.	
	111	LASCHITSCH et al. "Thickness Dependence of the Solvent-Induced Glass Transition in Polymer Brushes" Macromolecules, Vol. 32, No. 4 (1999) pp. 1244-1251.	
	112	LEE et al. "Surface Photograft Polymerization on Segmented Polyurethane Using the Iniferter Technique" Journal of Biomedical Materials Research, Vol. 47, No. 4 (1999) pp. 564-567.	
	113	LI et al. "Mono- and Dinitroxide Styrene Polymerization Initiators" Macromolecules, Vol. 29, No. 26 (1996) pp. 8554-8555.	
	114	LOCKHART et al. "Expression Monitoring by Hybridization to High-Density Oligonucleotide Arrays" Nature Biotechnology, Vol. 14, No. 13 (1996) pp. 1675-1680.	
	115	LUEKING et al. "Protein Microarrays for Gene Expression and Antibody Screening" Analytical Biochemistry, Vol. 270, No. 1 (1999) pp. 103-111.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A	Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application Number	10/045,094
	Filing Date	January 10, 2002
(use as many sheets as necessary)	Confirmation Number	4664
	First Named Inventor	Gerrit Klaerner et al.
	Group Art Unit	1645
	Examiner Name	
Sheet 9 of 12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	116	MALMSTROM et al. "Development of a New Class of Rate-accelerating Additives for Nitroxide-Mediated 'Living' Free Radical Polymerization" Tetrahedron Letters, Vol. 53, No. 45 (1997) pp. 15225-15236.	
	117	MALMSTROM et al. "Macromolecular Engineering via 'living' Free Radical Polymerizations" Macromol. Chem. Phys. Vol. 199, No. 6 (6/1998) pp. 923-935.	
	118	MANSKY et al. "Controlling Polymer-Surface Interactions with Random Copolymer Brushes" Science, Vol. 275 (3/1997) pp. 1458-1460.	
	119	MANSKY et al. "Ordered Diblock Copolymer Films on Random Copolymer Brushes" Macromolecules, Vol. 30, No. 22 (1997) pp. 6810-6813.	
	120	MATYJASZEWSKI et al. "Polymers at Interfaces: Using Atom Transfer Radical Polymerization in the Controlled Growth of Homopolymers and Block Copolymers from Silicon Surfaces in the Absence of Untethered Sacrificial Initiator" Macromolecules, Vol. 32, No. 26 (1999) pp. 8716-8724.	
	121	MATYJASZEWSKI et al. "Simple and Efficient Synthesis of Various Alkoxyamines for Stable Free Radical Polymerization" Macromolecules, Vol. 31, No. 17 (1998) pp. 5955-5957.	
	122	McGALL et al. "The Efficiency of Light-Directed Synthesis of DNA Arrays on Glass Substrates" Journal of the American Chemical Society, Vol. 119, No. 22 (6/1997) pp. 5081-5090.	
	123	MEIER et al. "Polymerization of Styrene with Initiator Ionically Bound to High Surface Area Mica: Grafting via an Unexpected Mechanism" Vol. 27, No. 6 (1994) pp. 1637-1641.	
	124	NAKAYAMA et al. "Preparation of Poly(ethylene glycol)-polystyrene Block Copolymers Using Photochemistry of Dithiocarbamate as a Reduced Cell-Adhesive Coating Material" Biomaterials, Vol. 20 (1999) pp. 963-970.	
	125	NAKAYAMA et al. "Surface Macromolecular Architectural Designs Using Photo-Graft Copolymerization Based on Photochemistry of Benzyl *N,N*-Diethyldithiocarbamate" Macromolecules, Vol. 29, No. 27 (1996) pp. 8622-8630.	
	126	NAKAYAMA et al. "Surface Macromolecular Microarchitecture Design: Biocompatible Surfaces via Photo-Block-Graft-Copolymerization Using *N,N*-Diethyldithiocarbamate" Langmuir, Vol. 15, No. 17 (1999) pp. 5560-5566.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A				Complet if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as many sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	10	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	127	OTSU "Iniferter Concept and Living Radical Polymerization" Journal of Polymer Science, Part A: Polymer Science, Vol. 38 (2000) pp. 2121-2136.	
	128	OTSU et al. "Solid-Phase Block Copolymer Synthesis by the Iniferter Technique" Vol. 19, No. 7 (1986) pp. 2087-2089.	
	129	PENG et al. "Polymer Brushes with Liquid Crystalline Side Chains" Macromolecules, Vol. 32, No. 20 (1999) pp. 6759-6766.	
	130	PETRO et al. "Polymers Immobilized on Silica Gels as Stationary Phases for Liquid Chromatography" Chromatographia, Vol. 37, No. 9-10 (11/1993) pp. 549-561.	
	131	PRUCKER "Grafting of Polymers to Microparticulate Silica by Using Immobilized Azo Initiators" Chemical Abstracts, Vol. 123, No. 18 (1995) Abstract No. 123: 229210z.	
	132	PRUCKER et al. "Mechanism of Radical Chain Polymerizations Initiated by Azo Compounds Covalently Bound to the Surface of Spherical Particles" Macromolecules, Vol. 31, No. 3 (1998) pp. 602-613.	
	133	PRUCKER "Synthesis of Poly(styrene) Monolayers Attached to High Surface Area Silica Gels Through Self-Assembled Monolayers of Azo Initiators" Macromolecules, Vol. 31, No. 3 (1998) pp. 592-601.	
	134	RUHE "Polymers Grafted From Solid Surfaces" Macromol. Symp., Vol. 126 (1997) pp. 215-222.	
	135	SARIN et al. "Inhibition of Acquired Immunodeficiency Syndrome Virus by Oligodeoxynucleoside Methylphosphonates" Proceedings of the National Academy of Sciences USA, Vol. 85, No. 20 (10/1988) pp. 7448-7451.	
	136	SEERY et al. "Designing Polymer Surfaces on Gold and Glass Using Surface Initiated Polymerizations" 214th ACS National Meeting, Los Vegas, NV (1997) Abstract 044.	
	137	SEERY et al. "Direct Synthesis of Polymer Brushes" Polymer Preprints, Vol. 40, No. 2 (1999) pp. 148-149.	
	138	SEIDEL et al. "Individual Polymer Paths and End-Point Stretching in Polymer Brushes" Macromolecules, Vol. 33, No. 2 (2000) pp. 634-640.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/043,394
				Filing Date	January 10, 2002
(use as ~~many~~ sheets as necessary)				Confirmation Number	4664
				First Named Inventor	Gerrit Klaerner et al.
				Group Art Unit	1645
				Examiner Name	
Sheet	11	of	12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	139	SEMENOV et al. "Collective Dynamics of Polymer Brushes" Macromolecules, Vol. 33, No. 2 (2000) pp. 613-623.	
	140	SHAH et al. "Using Atom Transfer Radical Polymerization to Amplify Monolayers of Initiators Patterned by Microcontact Printing into Polymer Brushes for Pattern Transfer" Macromolecules, Vol. 33, No. 2 (2000) pp. 597-605.	
	141	SIDORENKO et al. "Radical Polymerization Initiated from a Solid Substrate. 3. Grafting from the Surface of an Ultafine Powder" Macromolecules, Vol. 32, No. 14 (1999) pp. 4539-4543.	
	142	SOUTHERN et al. "Molecular Interactions on Microarrays" Nature Genetics Supplement, Vol. 21 (1/1999) pp. 5-9.	
	143	STEIN et al. "Physicochemical Properties of Phosphorothioate Oligodeoxynucleotides" Nucleic Acids Research, Vol. 16, No. 8 (1988) pp. 3209-3221.	
	144	SUGAWARA et al. "Novel Surface Graft Copolymerization Method With Micron-Order Regional Precision" Macromolecules, Vol. 27, No. 26 (1994) pp. 7809-7814.	
	145	THEATO et al. "Stabilization of Lipid Bilayers on Surfaces Through Charged Polymers" J.M.S. - Pure Appl. Chem., Vol. A36, No. 7&8 (1999) pp. 1001-1015.	
	146	TOVAR et al. "Patterning Molecularly Thin Films of Polymers - New Methods for Photolithographic Structuring of Surfaces" Supramolecular Science, Vol. 2, No. 2 (1995) pp. 89-98.	
	147	TSUBOKAWA et al. "Effect of Initiating Groups Introduced onto Ultrafine Silica on the Molecular Weight Polystyrene Grafted onto the Surface" Polymer Bulletin, Vol. 31, No. 4 (1993) pp. 457-464.	
	148	TSUBOKAWA et al. "Effect of polymerization conditions on the molecular weight of polystyrene grafted onto silica in the radical graft polymerization initiated by azo or peroxyester groups introduced onto the surface" Colloid & Polymer Science, Vol. 273, No. 11 (1995) pp. 1049-1054.	
	149	TSUBOKAWA et al. "Surface Grafting of Polymers onto Carbon Thin Film" Journal of Applied Polymer Science, Vol. 58, No. 8 (11/21/95) pp. 1221-1227.	
	150	TSUBOKAWA et al. "Surface Grafting of Polymers onto Glass Plate: Polymerization of Vinyl Monomers Initiated by Initiating Groups Introduced onto the Surface" Journal of Applied Polymer Science, Vol. 65 (1997) pp. 2165-2172.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08A	Complet if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Application Number	10/043,394
	Filing Date	January 10, 2002
(use as many sheets as necessary)	Confirmation Number	4664
	First Named Inventor	Gerrit Klaerner et al.
	Group Art Unit	1645
	Examiner Name	
Sheet 12 of 12	Attorney Docket No.	SMX 3093.6 (2001-006R1)

	151	TSUBOKAWA et al. "Surface Modification of Carbon Microbead by the Grafting of Polymers" J.M.S. - Pure Appl. Chem., Vol. A32, No. 3 (1995) pp. 525-535.	
	152	VATANSEVER et al. "Modification of Glass Surfaces by Using Tethered Romp Catalysts" 215th ACS National Meeting, Dallas, TX (1998) Abstract 146.	
	153	WANG et al. "Facile Synthesis of New Unimolecular Initiators for Living Radical Polymerizations" Macromolecules, Vol. 31, No. 19 (1998) pp. 6727-6729.	
	154	WECK et al. "Ring-Opening Metathesis Polymerization from Surfaces" Journal of the American Chemical Society, Vol. 121, No. 16 (1999) pp. 4088-4089.	
	155	WEISENHORN et al. "Imaging Single-Stranded DNA, Antigen-Antibody Reaction and Polymerized Langmuir-Blodgett Films with an Atomic Force Microscope" Scanning Microscopy, Vol. 4, No. 3 (1990) pp. 511-516.	
	156	WILLIAMS et al. "A New Mechanism Involving Cyclic Tautomers for the Reaction with Nucleophiles of the Water-Soluble Peptide Coupling Reagent 1-Ethyl-3-(3-(dimethylamino)propyl)carbodiimide (EDC)" Journal of the American Chemical Society, Vol. 103, No. 24 (1981) pp. 7090-7095.	
	157	XIA et al. "Soft Lithography" Angew. Chem. Int. Ed., Vol. 37 (1998) pp. 550-575.	
	158	YAMAMOTO et al. "Preparation of Well-Defined Polymer Brushes on Silicon Substrate by the Surface-Initiated ATRP Technique and Their Characterization" Polymer Preprints, Vol. 40, No. 2 (1999) pp. 401-402.	
	159	YIN et al. "Grafting of Poly(Acrylic Acid) onto Nonporous Glass Bead Surfaces" Polymers for Advanced Technologies, Vol. 8(1997) pp. 761-766.	
	160	International Search Report for PCT/US00/18339 dated September 6, 2000.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1]Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.